1: Gifford E-4,5 (1920-1921) 1929 OU9 Tonga OU9

The area of Tongatabu, however, probably does not exceed 150 square miles, which on the basis of full-blooded Tongan population, in 1921, gives the average of 65 individuals to the square mile, a number probably sufficient for communication in the traditional way, if the bulk of the population fringed the ancient highway which ran from end to end of the island. It should be borne in mind that the ancient population lived largely on farms rather than in villages. Ancient burials are to-day found in the bush where farms once flourished.

Cook (19, vol. 1, p. 297) mentions an assemblage at an entertainment on Tongatabu Island, concerning which "some of us computed, that, at this time, there were not less than ten or twelve thousand people, in our neighborhood; that is, within the compass of a quarter of a mile; drawn together, for the most part, by mere curiosity." Providing the total is not overestimated, this statement would seem at first glance to indicate a larger population for Tongatabu Island than that of the present day. But many people from neighboring islands of Tongatabu and from Haapai and Vavau were doubtless present. In reference to the population of the islands near Tongatabu in 1797 the following quotation from Wilson (65, p. 95) is pertinent: "Passing to the northward of Eoo-āije, we steered W.S.W. to the entrance, then W. by S. and W. up the harbour, followed by the above canoe and several others, which put off from the eastern part of the main island and the islets that lie scattered upon the reef."

The statement of Cook (19, vol. 1, p. 246) that "at least three thousand people" assembled at the entertainments on Lifuka Island indicates a population in 1777 no greater than in 1909 when Lifuka and the neighboring islands Foa and Haano had a population of 3,565. With the rest of Haapai to draw upon as well, a crowd of three thousand people might be assembled readily enough. Cook's description of the island of Mango suggests that the population in 1777 did not much exceed the population of 42 individuals in 1906 and it is of interest to note that he found Uoleva Island, just south of Lifuka, as destitute of inhabitants as it is to-day.

The grouping of people in villages and the consequent desertion of farms as residences has taken place probably since 1773, when Cook (18, vol. 1, p. 213) described the country as follows:

> The produce and cultivation of this isle [Eua] is the same as at Amsterdam [Tongatabu]; with this difference, that a part only of the former is cultivated, whereas the whole of the latter is. The lanes or roads necessary for travelling, are laid out in so judicious a manner, as to open a free and easy communication from one part of the island to the other. Here are no towns or villages; most of the houses are built in the plantations, with no other order than what conveniency requires; they are neatly constructed, but do not exceed those in the other isles. The materials of which they are built, are the same; and some little variation in the disposition of the framing is all the difference in their construction. The floor is a little raised, and covered with thick strong mats; the same sort of matting serves to inclose them on

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1: Gifford E-4,5 (1920-1921) 1929 OU9 Tonga OU9

the windward side, the other being open. They have little areas before the most of them, which are generally planted round with trees, or shrubs of ornament, whose fragrancy perfumes the very air in which they breathe.

Again, in 1777, Cook (19, vol. 1, p. 314) describes Tongatabu, as he saw it on "an excursion into the country," in the following words:

> We found by far the greatest part of the country cultivated, and planted with various sorts of productions; and most of these plantations were fenced around. Some spots, where plantations had been formerly, now produced nothing, lying fallow; and there were places that had never been touched, but lay in a state of nature; and, yet, even those were useful, in affording them timber, as they were generally covered with trees. We met with several large uninhabited houses, which, we were told, belonged to the king. There were many public and well-beaten roads, and abundance of foot-paths leading to every part of the island.

The nearest approach to a village, observed by Cook was the capital Mua (the modern villages of Lapaha and Tatakamotonga), where the principal chiefs of Tongatabu dwelt, especially when attending the court of the Tui Tonga.

A map of Tongatabu Island, published in 1810 by Vason (60), although doubtless inaccurate as to details, shows the great road traversing the length of Tongatabu and the numerous lanes separating the farms.

La Perouse (47, vol. 2, pp. 171, 172) describes the south coast of Tongatabu as follows:

> As the wind was to the north, I steered towards the south coast of the island, which is very free from danger, and may be approached within three musket-shots. The sea broke furiously all along the coast; but the breakers were upon the shore; and beyond them we perceived the most luxuriant orchards. All the island appeared to be cultivated; the fields, which were beautifully green, were bordered with trees . . . The huts of the islanders were not collected together in villages, but dispersed over the fields, like the farm-houses in our best cultivated plains.

In 1793 conditions seemed to be unchanged, for Labillardière (37, vol. 2, pp. 135, 136, 153) says:

> In advancing to the westward, we went over a vast enclosure formed by palisades, the stakes of which, placed obliquely, were pretty close to each other, and in the middle of which grew the bread-fruit tree, the plantain-tree, the fan palm, *corypha umbraculifera*, &c. Farther on, we found, within a fence not near so extensive, a small hut, of a conical form, in which we learnt were deposited the remains of a chief lately dead; and we were also informed that it was forbidden to enter it.
>
> We then walked, for near a quarter of an hour, along a narrow road lined with palisades on both sides: we followed it as far as a very large lawn, where King Toobou was shortly to make his appearance. . . .
>
> We soon after entered the fields, where we saw each individual's ground divided into small plots, surrounded by palisades, and in a high state of cultivation.

The missionaries who took up their residence in 1797 speak of certain places as the residences of chiefs—for example, Haateiho and Mua (spelled

1: Gifford E-4,5 (1920-1921) 1929 0U9 Tonga 0U9

The first Matauvave came from Mua, Tongatabu. He was accompanied by an official named Uto [probably Kolomoeuto mentioned above]. Matauvave went to live in Uoleva Island. If he wanted to let the people know that he was going to give a command (*fono*) he would send someone to the north shore of Uoleva to remove his garment and expose his buttocks. Then the people in Lifuka would know that the governor was going to give a command as to certain work to be done. If the signal were given in the afternoon, the people assembled that evening in Uoleva. When a chief's grave was to be dug or a pigeon mound to be erected sufficient labor was obtained for the earth to be dug and the mound formed in the night. In the morning the mound (*sia*) would be already made. The only reason the informant could assign for the night work was to make the people "sorry."

Uoleva was set aside as a pigeon reserve and had only the necessary people dwelling on it. The Uoleva mounds were built by the Lifuka people. The name of the first mound built on Uoleva was Finevalapililolo. The second was Siamaka. The third was Siakape; the fourth was Kulufotu. Kulufotu was where the wild pigeons were caught with nets set on long poles, into which they were decoyed by a captive pigeon on a long cord. Tunuetefekekaekaieteika was the fifth pigeon mound built and Tulikituahaa the sixth. A seventh mound was Mamataatu. The present Matauvave said there were many others built, about thirty in all, but he knew the names of only seven. He said all were provided with ramps or steps and that some were larger than the Siamafuauta in Tongatabu. He knew of no sacrifices in connection with pigeon mound construction.

Matauvave would stand on the *sia* of Mamataatu. At dusk a flock of pigeons would make a sudden appearance in Lofanga Island. Then they would come to Matauvave's *sia* and he would catch them. But the *lupetoto* (perhaps "pigeon spirit") died there and not one pigeon came again. Then he shifted to Muitoa in Haano and the name of the *sia* erected there by the Haano people is Toloke. It seems likely that the numerous pigeon mounds on the neighboring Nukunamu Island may have been erected also under a Matauvave's directions. Pigeons migrated from Samoa to Tonga in October, when it was said that anciently they came in such numbers as to look like a cloud. They were said to remain in Tonga until March. [The species is *Globicera pacifica*.]

The mound Huluipaongo on the shore of Lifuka Island, facing Uoleva, is the burial place of holders of the Matauvave title, the latest one interred being the mother's brother of the incumbent of 1920. This mound is said to have originated from the clay thrown ashore by people washing their heads in the sea after building pigeon mounds. The clay used occurs as a subsoil in Uoleva.

The first Matauvave is reputed to have built the fortress Velata, Lifuka Island. All Haapai furnished laborers for this work.

One Matauvave came and stayed in a place called Tokilangi, which stands in Fanganonu in Pangai, Lifuka. His daughter went to Uoleva and she slipped from the ford (*ahanga*) and hurt herself. That is why the place is called Kofokohaangatoma. All the people were then told to make a road connecting the two islands at low tide and it was called Taaemaka. There were two roads made.

The first Matauvave who was taken to be governor of Haapai died there. He was buried on the seashore at Nuanga, Lifuka Island. His god was Aloalo. Tamatuiumee was the name of his *api* or tract of land.

Another man was appointed [Taufa Tofua] to dwell in Tofua Island and at the same time the warrior Havili was appointed to stay in Lofanga Island.

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STRUCTURAL FORMS

MOUNDS AND PLATFORMS

172 34 Although no Tongan mounds are constructed entirely of stone, many mounds of earth have sides faced with stone retaining walls. Most of the mounds take the form of a truncated cone with flat top and sloping sides. Several mounds might be described as foreshortened cylinders terminating in flat tops marked by a large, cylindrical central pit with retaining walls of stone. One mound observed resembles a truncated pyramid with four stone-faced sides, which slope rather abruptly towards the flat top.

172 333 34 The stonework of the truncated cones differs radically from that of the cylindrical mounds. Most of the cone-shaped mounds are surfaced with rough stones piled indiscriminately one upon the other—a sort of cyclopean masonry. In some of these mounds, and in one truncated pyramid, the stones are roughly rectangular slabs. In some of them this technique is marked by smooth stone fitting, tne stones exactly shaped and sized to occupy a certain position and to produce a continuous, regular veneering. All of the cylindrical mounds observed are retained by walls constructed after one pattern and of similar materials; rough pieces of limestone are piled one upon the other in a vertical wall of uniform width.

Platforms are of two types; round and rectangular. The rectangular type includes single platforms and storied platforms, or stepped pyramids. All platforms whether single or storied, round or rectangular, are earth filled enclosures retained by walls of upright slabs in contact at adjoining edges. In some of the smaller structures, the slabs are natural flat pieces roughly broken about the edges and but indifferently fitted together. In most structures, however, the stones of the retaining walls are dressed and sized, producing a smooth, unbroken wall of continuously even height, and fairly even thickness.

172 128 34 The distinction between low mounds with flat tops and platforms may seem arbitrary and vague. It is recognized here because of a corresponding distinction made by the native descendants of those who built these structures. The Tongans almost invariably base their nomenclature upon purpose and use rather than upon form or appearance, and it so happens that the term *sia*, which like the English "mound" refers to small elevations both natural and artificial, is generally applied to structures made for certain uses, but is not used to designate the types here described as platforms. Of all the structures observed, only those classified by the natives as *sia* lack the upright slab retaining walls which characterize all other earth and stone structures.

491 172 The tops of some mounds and platforms were made accessible by roadways, or approaches, ascending gradually from the surrounding land—the

7: McKern A-4,5 (1920-1921) 1929 OU9 Tonga OU9

length of the roadway being determined by the height of the structure. Most of these approaches were supported on either side by retaining walls, similar to the walls of the main structure. A few were paved with stone slabs or rough fragments of stone, or surfaced with gravel. Access to certain platforms was by means of low stone steps placed at certain points against the retaining walls. Where the low steps adjoin relatively high walls, they seem merely to have marked the proper place for mounting rather than to have afforded help in ascending the structure.

STONE HOUSE PARTS

Many ancient houses of the better class were supplied with a stone door sill, made or a single oblong, roughly blocked out hexahedron about a foot in width, which filled the base of the doorway to a height of somewhat less than a foot. Such stone sills appear in a few modern houses but it is probable that a wooden sill was always more common.

Stone house posts and rafters were seen in only one structure—a burial house situated on the top of a stone walled tomb on the island of Tongatabu. The fragments now remaining of these stone house parts are smoothly dressed and show rather elaborate end mortising (p. 38).

STONE WALLS AND MONUMENTS

Independent walls of stone are by no means common in Tonga, but are represented by several examples in fairly good condition. All these walls are built of undressed and irregularly shaped pieces of both reef limestone and "sandstone," of a size easily carried and handled.

Monumental stones form part of the retaining walls of many mounds and platforms. These are placed regularly to constitute a part of the wall and differ from the other wall elements only in their larger size. Usually they stand up abruptly, at or near a platform corner, to a height considerably greater than the average height of the wall.

Stelae of undressed basalt occur independent of other structures at certain places. The only one seen is in the town of Mua (p. 93), but two others are reported from the distant volcanic island of Niutoputapu. The great trilithon, Haamongaamaui (p. 63), situated in the eastern part of Tongatabu. stands out with paradoxical distinctness from all other Tongan structures, as well as from those of other Pacific islands. Not only is its shape unique, but the great size of the three dressed stones employed in the structure, and the deep mortising of the lintel piece into the uprights, render the work a surprising oddity as well as a worthy monument to Tongan ability and ingenuity in stone construction.

7: McKern A-4,5 (1920-1921) 1929 009 Tonga 009

distribution of *esi*, therefore, is not related to structure. All the circular *esi* observed are apparently of ancient origin, but some of the square *esi* are certainly of quite recent origin. According to this very unsatisfactory evidence, the circular type might be interpreted to be the older of the two.

Tradition, history, field investigation, and comparative study have led to the classifying of the following mounds as *esi*.

1. Circular mounds on the east side of Euakafa Island, Vavau, at a spot where cool breezes and a fine view are dominant features (fig. 1).

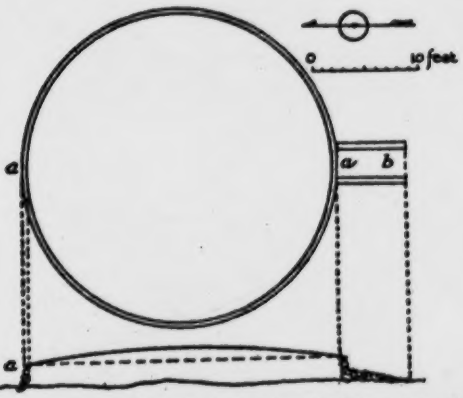

FIGURE 1.—Plan of *esi* mound on Euakafa Island, height 3 feet, diameter 30 feet. *a*, retaining wall 2 feet high, 1 foot thick; *b*, approach 6 feet long, 4 feet wide.

One mound is partly surrounded by a retaining wall made of blocks of undressed coral limestone piled one upon the other. The top of the mound is red earth brought from a nearby place. An approach of earth, supported by walls of undressed stones, ascends the mound from the south.

About 40 feet south of this mound is the second mound, very like the first in size, general shape and natural setting, but lacking the retaining wall and inclined approach.

2. Mound situated on Kafoa, a hill 420 feet high about 2 miles northwest of Neiafu, Vavau (fig. 2).

Kafoa is a circular earth mound retained by walls of rough coral stones which vary greatly in size. In the approximate center of the top is a slightly oval pit lined with rough coral stones that act as a retaining wall.

From the northwest, an earth road rises from the hill top to the top of the mound. The dirt sides of the roadway observe an angle of about 45°. Many large toa trees (*Casuarina*), not indigenous to this locality, are growing about the top rim. Kafoa commands the best view to be had of Vavau and it is said that a cool breeze is to be enjoyed here at all times.

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173 The *esi* on Kafoa hill is said to have been built at an ancient date for Kafoa, a son of one of the native kings. One account gives the name of the prince as Kafoamotalau; another (13, pp. 96-98) names two princes, Kafoa and Talau (Kafoamotalau), and states that these royal youths from Tongatabu were visiting in Vavau. Two of their attendants, who had been sent by their masters to Tongatabu to snare pigeons, were unfaithful to

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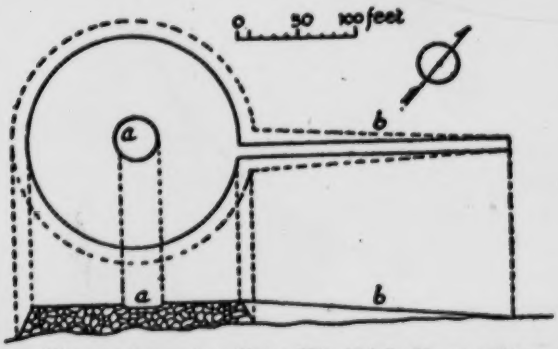

[491] FIGURE 2.—Plan of *esi* mound on Kafoa Hill, Neiafu, Vavau, height 7 to 10 feet; diameter at base 100 feet, diameter at top 85 feet: *a*, central pit about 1 foot deep and 13 feet in diameter, *b*, earth roadway 115 feet long, 6.5 feet wide with a grade of about 10°.

173 their mission and returned to Vavau without the pigeons. To atone for this disobedience, they set about to build an *esi* on the hill which is now called Kafoa. When it was finished, they told Kafoa and Talau of their transgression and of their atonement. The young chieftains were pleased and proposed to race to the *esi*, the winner's name to be applied to the mound. Kafoa won.

173 This story mentions various points of interest apparently associated with
172 the mound, most of the places could not be located. The beach *manutunfanga* (where the birds stand) is just below the hill; many sea birds were observed
173 to congregate there. Parts of the road *tausia*, ascending the hill from the
172 beach, were identified (p. 89). The *halanukonuka* (road of sweet scented
491 shrubs) is said to be the road which still follows the crest of the ridge lead-
[137] ing up from the interior of the island toward the mound and along which many flowering shrubs are still to be seen. The *halakavakava* (bridge road) may refer to the long inclined approach leading to the top of the mound.
173 The artificial mound *tofaki* could not be located. The names of ornamental
172 trees associated with the mound, *tupouhau* (*hau*, king) and *kainangamofae*
345 (place of eating with mother), suggest that the structure was an *esi*.

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172 345 horizontal, its original position probably was vertical. Tradition defines this slab as the back rest of the king when seated upon the mound.

8. Siumafuauta, east of Maofanga, Tongatabu, 250 feet from low tide 172 345 mark near the point of land called Tukutonga. It is described by Cook (4, vol. 1, p. 289) in the following words:

175 At this place is a work of art, which shows, that these people are capable of some design, and perseverance, when they mean to accomplish anything. This work begins on one side, as a narrow causeway, which, becoming gradually broader, rises, with a gentle ascent, to the height of ten feet, where it is five paces broad, and the whole length seventy-four paces. Joined to this is a sort of circus, whose diameter is thirty paces, and not above a foot or two higher than the causeway that joins it, with some trees planted in the middle. On the opposite side, another causeway of the same sort descends; but this is not above forty paces long, and is partly in ruin. The whole is built with large coral stones, with earth on the surface, which is quite overgrown with low trees and shrubs; and, from its decaying in several places, seems to be of no modern date. Whatever may have been its use formerly, it seems to be of none now; and all that we could learn of it from the natives was, that it belonged to Poulaho, and is called Etchee.

172 345 Siumafuauta stands on level ground, practically in a mangrove swamp called Tafaloto, at a place where the swamp merges with the lagoon.

The structure is a circular, flat-topped mound 18 feet high and 100 feet in diameter at the top. The walls are of rough though smoothly piled pieces of coral stone, and 172 stand at an angle of about 80° from the horizontal. From the southwest an inclined road 24 feet wide and 140 feet long leads to the top of the *esi*. A similar inclined 345 approach ascends from the east. From the top of the mound the road extends 137 feet with a width of 27 feet, then turns northward for 20 feet with a width of 12 feet 491 (Pl. II, *C*). Both approaches have stone faced sides exactly like those of the mound proper, and are paved with coral gravel. Near the center of the flat top is a circular, 172 flat-bottomed pit 22 feet in diameter and 0.9 foot in depth, walled on the sides with 345 vertical slabs of crudely dressed stone. Individual stones in this ring do not exceed 3 feet in length and are from 0.4 foot to 0.7 foot in thickness.

Except in type of elevation, Siumafuauta resembles Kafoa and, like Kafoa, is the center of controversy as to its original intent and use. Some [491] native residents refer to it as an *esi;* others, as a pigeon mound. Those explaining it as a pigeon mound cite as evidence the central pit and the presence of undisputed pigeon mounds in the immediate neighborhood which seem formerly to have been connected to Siumafuauta by roads paved with coral gravel.

173 On the other hand, an old tale has it that the Tui Tonga Pau, one of the later kings of the ancient dynasty, came to dwell at the point called Tuku- 172 tonga in order to superintend the building of a proposed causeway crossing 345 the lagoon to Mua, the traditional capital of the Tui Tonga. His sister, the Tui Tonga Fefine, whose name was Siumafuauta, came with him. The [342] king then built the large mound as a foundation of a house for his sister

7: McKern A-4,5 (1920-1921) 1929 OU9 Tonga OU9

172 345 223 Briefly, the mound was used as follows: The sportsmen occupied the structure, some on the mound surface where they manipulated the *heu* poles, and some in the pit to take the pigeons from the snare. Captive pigeons, attached to long cords, were allowed to fly among the tree tops above the mound where they served as decoys to attract their wild kin. When the wild pigeons came, lured by the calls of the decoys, the *heu* manipulators dropped the net over them and brought them down into the pit, where they were caught and disposed of by the men assigned to that task.

The mounds of Type II lacked the large, deep, central pit of Type I. In its place was a depression 15 to 20 feet in diameter and seldom more than 1 foot in depth. One informant explained that the *heu* manipulators lay prone in these depressions, but such an explanation, unsupported by corroborative testimony, is of doubtful value. No good argument offers itself to show the practical necessity for a pit of any character in such structures, but the shallow type of pit seems especially useless. These shallow pits might be regarded as more or less useless survivals of the more archaic, deeply pitted mounds, but no evidence for such an assumption is apparent. In the following descriptions of pigeon mounds only artificial ones are included.

172 345 [128]

Mounds in Vavau

1. Kaufotutata, on the eastern outskirts of the town of Utungake, Utungake Island, Vavau, Type I.

Kaufotutata stands on a natural rising overlooking the sea to the north. Its measurements are: diameter at base, 100 feet; diameter at top, 80 feet; height, depending upon ground contour, 3 to 7 feet. Its sloping sides are faced with a compact layer of rough coral stones. The pit, originally about 19 feet in diameter and 4 feet deep, has recently been filled to allow a house to be built. Its sides are vertically walled with stones like those used in the outer wall. From the south, a dirt road 20 feet long and 6 feet wide leads to the top of the mound. The stone work of the mound is continued along the road with similar slopes. This pigeon mound was built, according to tradition, by a prince of the Tui Tonga family named Moka.

[491]

Other pigeon mounds are reported from Vavau, but these were not located, unless Kafoa (p. 11) served at times in that capacity.

Mounds on Ualeva

[223] Judging from the number of pigeon mounds, the island of Ualeva, Haapai, must have had at one time an enviable reputation as a place for pigeon snaring. Local informants agree that these were built by Matauvave I, who was the first known administrator of Haapai to be appointed by the Tongan kings. Geneological evidence places the time for his assuming this office at about 1540-1550 A. D.

[173]

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128 172 345 [124] The following descriptions include all of the pigeon mounds which a thorough survey of the island could discover. The accuracy of the names cannot be vouched for, as they were supplied by a single informant, the only man found who professed to have any knowledge of the names. Three mounds, Nos. 8, 9, and 10, are classed as pigeon mounds because closely associated with structures known to be pigeon mounds. Native informants were of the opinion that they were used by the pigeon snarers in some capacity, possibly as temporary dwelling sites for the chiefs engaged in the sport. They are like the pigeon mounds which they neighbor except for the absence of any trace of a central pit or basin.

172 345 2. Finevalafililolo, in central southern Ualeva, Type II (fig. 6).

Finevalafililolo is composed of a mixture of sand and earth. The centrally placed pit has retaining walls of dressed rectangular slabs of coral stone averaging 3.5 feet in length, 0.7 foot in thickness and standing 2 feet out of the ground. The flat floor of the basin is of earth. The mound is surrounded at irregular intervals by ten funnel-shaped pits averaging 10 feet in depth and 25 to 30 feet in diameter, situated from 25 to 75 feet from the mound base. They are said to have furnished the earth from which the mound is constructed.

3. Siaulufotu, at the south end of Ualeva Island, Type II (fig. 7).

The sloping sides of Siaulufotu are surfaced with stone work consisting of an inner base of rough, loosely piled fragments and an outer coating intact only in places, of rectangular, roughly dressed slabs laid flat, their edges fitting together haphazardly (fig. 7, *c*). These slabs are 2 to 6 feet long, 1.5 to 4 feet wide and 0.3 foot to 0.5 foot thick. The largest slab in place measures 6 by 4 feet by 0.5 foot. The central depression is surrounded by rectangularly dressed slabs of stone averaging slightly more than 3 feet in length, 0.6 foot in thickness, and which stand 2 feet above ground and [491] 1 foot below the bottom of the flat earthen floored basin. A steeply inclined dirt roadway from the northwest leading to the top of the mound is paved with rough stones of varying sizes, their flat sides turned upward to make a comparatively smooth surface.

[351] Siaulufotu is entirely surrounded by a ditch or series of connected pits, 30 feet wide and 12 feet deep, which stands 40 to 50 feet from the mound base. It is thought to have furnished earth for the construction of the mound. Near the northernmost 172 base of the mound is a flat bottomed well called Vaisioata (Water-mirror). Its walls 312 are of loose, roughly piled stone and slant outward from the base at an angle of about 15° from the perpendicular. The rim of the well is 8 feet in diameter and the depth 3 feet, of which 1 foot is under water. The bottom appears to be partly filled with loose 172 debris. About 50 feet east of the mound was found a quarry site where stone for the structure may have been obtained. At this place about a foot of surface soil had 316 been removed, exposing coral "sandstone" which has been cut through in a way to suggest the removal of rectangular slabs.

172 345 4. Unnamed mound, Ualeva Island, Type II.

This mound consists of a circular pile of earth with a horizontally flat top. It is 3 to 4 feet high and has a base diameter of 82 feet and a top diameter of 72 feet. The earthen floor of the basin is horizontally flat. Its sides are supported by dressed rectangular slabs of stone practically all the same size, about 3 feet long, 0.6 foot thick, and 2 feet out of the ground. Several large funnel-shaped excavations near the mound probably indicate the source of material for the construction.

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5. Tulikitauha, on Ualeva Island, Type II (fig. 8). 172 345

Tulikitauha is a flat-topped circular pile of earth. The centrally located basin has marginal walls like those of the other mounds on Ualeva. This mound is unique in that it is surrounded by a stone wall about the base, which outlines a square area. Many of the stones have apparently been removed, but enough remain to outline a rectangle with sides tangent to the mound base. The stones used are dressed, rectangular slabs set up on edge and in contact end to end. The largest is 3 feet long, 0.8 foot thick, and stands 3 feet above the ground. The other stones are only slightly smaller, all of an even height. Upon excavation, the base of one stone proved to be 2.5 feet below ground. The remains of what was undoubtedly an inclined earthen approach ascending the mound, is to be seen on the north side of the structure. Its exact original dimensions could not be determined. The many large, funnel-shaped pits scattered about the mound average 7 feet in depth and 20 feet in diameter.

6. Tunueteikakaekaietefeke or Tunuetefekekaekaieteika. I could not find a mound of this name said to be on Ualeva Island. It may be one of the unnamed mounds.

7. Siatoloke on the southwest end of Ualeva Island, close to the seashore, Type II (fig. 9).

This doubtfully identified mound is circular, flat-topped, and is approached by two sloping roadways. The sloping sides of both mound and approaches are made of stone slabs of various sizes, most of them so small as to be conveniently handled by one man. Although not dressed, each stone has parallel flat surfaces due to natural bedding. The stones paving the sides of the mound proper are piled with flat surfaces together and outer edges matched to constitute a smooth surface parallel to the slope of the structure (fig. 9, *e*). Both the top of the mound and the inclined approaches are covered with a mixture of flat slabs of all sizes and rough stones, which forms a fairly smooth pavement. A large, flat, stone slab of irregular outline marks the top and bottom of the paved roadway of each of the ascending approaches. [491] [491]

8. Siamaka (Stone-mound, probably a recent appellation), in the central southern part of Ualeva Island (fig. 10).

Siamaka is a circular structure fashioned from rough, naturally shaped, coral stones of varying sizes, piled loosely but with some idea of maintaining a smooth exterior surface. It is probable that only the exterior surface of the mound is of stone, as there are a number of sizable excavations adjoining the mound where material may have been obtained for building the structure. The flat top has no central pit nor other special feature except a stone pavement. It is now entirely overgrown with brush and trees.

9. Siakape, a short distance to the southeast of Finevalafililolo (No. 2).

Siakape is a circular, flat-topped earthen mound, without a central basin or pit in the top. It is 15 feet high and has a diameter at the bottom of 125 feet, and at the top of 65 feet. Like similar mounds, it is surrounded by an irregular circle of funnel-shaped pits which average 10 feet in depth and 30 feet in diameter and are placed 50 to 100 feet from the mound base.

10. Unnamed mound on Ualeva Island (fig. 11).

This mound is a circular, straight-sided, flat-topped, earthen structure without a pit or basin on the top. Inclined roads ascend to the mound top, from the northeast

FIGURE 12

FIGURE 13

FIGURE 14

FIGURE 12.—Plan of pigeon mound Siaheulupe, Tongatabu, height 5-6 feet, diameter of base 119 feet: *a*, outer retaining wall of stone; *b*, central pit 19 feet in diameter, 4 feet deep; *c*, gravel roads leading from mound base, 6 feet wide; *d*, remains of stone pavement on platform top.

FIGURE 13.—Plan of unnamed pigeon mound, Tongatabu, height 6.5 feet, diameter of base 100 feet: *a*, central pit 18 feet in diameter, 4 feet deep; *b*, outer retaining wall; *c*, stone ramps; *d*, pavement-like structure on platform.

FIGURE 14.—Plan of pigeon mound Siamoatao, Maofanga, Tongatabu, height 3.5 feet, diameter at base 65 feet: *a*, stone retaining wall; *b*, *c*, gravel roads leading from mound base.

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7: McKern A-4,5 (1920-1921) 1929 OU9 Tonga OU9

172 345 and from the southwest. The mound is surrounded by series of connected, funnel-shaped pits, averaging 20 feet in diameter and 8 feet in depth.

Mounds on Tatafa, Nukunama, and Haano

In the Haapai group Matauvave I is said to have built a pigeon mound on the island of Tatafa. Other pigeon mounds which were not examined are reported as situated on the islands of Nukunama and Haano. A mound on Haano near the town Muitoa, is called Siakotoloke.

Mounds on Tongatabu

The only pigeon mounds observed on Tongatabu are situated east of the town of Maofanga, south of the Tukutonga point, in the mangrove swamp called Tafaloto.

11. Siaheulupe (Pigeon-snaring-mound). Type I (fig. 12).

About one-fourth mile southwest of the mound Siumafuauta (p. 18). Siaheulupe is a circular, flat-topped platform, with a vertical outside retaining wall built of closely piled fragments of rough stone. The walls of the centrally placed circular pit are identical in shape and structure to the outside retaining walls.

172 491 Three roads lead away from the foot of the mound. Each consists of two parallel rows of rough stones averaging 1 foot in thickness, between which is a fill of coral gravel several inches deep. The roads wander about in a haphazard fashion and disappear for considerable stretches where high tide water has washed the materials away. One road extends north to the sea, another extends east and entirely disappears at a distance of about 200 yards. The third road extends south for a short distance before [345] disappearing. In line with the north road the top mound surface is marked by a pile of stones that suggest a pavement between the central pit and the outer wall. No similar paved areas are to be seen in line with the other two roads.

172 345 12. Unnamed mound about 835 yards south of Siumafuauta, Type II (fig. 13).

172 491 [345] In most respects this mound is exactly like Siakotoloke (No. 7), and the coral paved roads approaching the two mounds are similar. The southwestern road disappears soon after leaving the mound. The northeastern road can be followed for about 300 yards before it is lost in the tide washes of the swamp. Upon approaching the mound these roads rise to its top surface, along gradual inclines about 40 feet long and retained by stone walls exactly like those supporting the sides of the mound. West of the central 172 345 pit is a bed of large stones entirely out of line with the roadways and more like a filled depression than a pavement (fig. 13, *d*). It can best be described as a roughly rectangular hole nearly filled with large stone fragments. A close examination disclosed no evidence of fire.

13. Siamoatao, 380 yards south of the mound Siaheulupe (fig. 14).

Siamoatao is a circular mound and has a gently convex top surface. The surrounding perpendicular wall of rough, loosely piled stones is only 1.7 feet in height but the 172 491 mound is 3.5 feet high at its center. Two roads, paved with coral gravel, approach the mound without inclining upward to its level. The western of these roads divides immediately upon leaving the mound, one branch curving towards the south, the other

7: McKern A-4,5 (1920-1921) 1929 OU9 Tonga OU9

towards the north. Both of these branches can be traced for several hundred yards of meandering course before they become too indistinct to follow. A second road extends eastward from the mound for a short distance and then disappears.

There is no central pit or other surface peculiarity on Siamoatao, which brings to mind the similarly pitless mounds on the island of Ualeva (Nos. 8, 9 and 10). The suggestion that such mounds may have been temporary abodes of chieftains engaged in pigeon snaring is here repeated as no other explanation is known.

The roads associated with these mounds probably served to furnish dry access to them across the surrounding swamp. Their technical structure constitutes a unique feature not observed elsewhere in old Tongan roads (p. 89).

UNCLASSIFIED MOUNDS

1. Tuavavau, several miles northwest of the town of Utungake, on the island of Utungake, Vavau (fig. 15).

According to a tradition recorded by Gifford (13, p. 202), Tuavavau was the name of a beautiful girl who lived on this mound. The story is that many lovers camped about the mound where they could often see her. Among

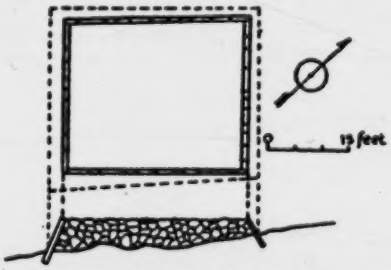

FIGURE 15.—Plan of Tuavavau, Utungake, Utungake Island, Vavau, height 2 to 6 feet, length at top 35 feet, width at top 29 feet.

these was the great chieftain Tuilakepa. Finally their unsought attentions drove the girl to distraction and she leaped over the cliff into the sea. There is said originally to have been a circle of small mounds about this structure, the sites for the houses of the many lovers. None of these mounds could be located. Intensive agricultural pursuits about the place may well have destroyed them, if they ever really existed.

Tuavavau is an artificial rectangular structure, built upon a rocky elevation near the shore commanding an excellent view of the surrounding country. The entire mound is solidly built of undressed slabs of coral "sandstone," save for a surfacing which consists of a row of dressed rectangular slabs set up on edge along the sides which stand at a slope of about 70°. The straight sides of the platform are placed quarterwise with

7: McKern A-4,5 (1920-1921) 1929 OU9 Tonga OU9

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called *kalakala* (*kala*-demise, applied to the Tui Tonga and Tamaha; a road or path; a doorway or entrance; a sacred club). The surface of these stones are fairly smooth and adjoining sides meet in sharply defined angles. In the retaining walls on all four sides of the langi are selected stones bearing incised decorative designs (p. 79).

In the center of the east and west sides of the structure and exactly opposite each other are two approaches, not unlike stairways in which the steps of the pyramid constitute the steps of the stair, extending from the ground level to the top of the langi. Each stairway consists of parallel stone walls, about 12 feet apart, cutting the tiers of the langi at right angles to constitute retaining walls for the ascending approach. The upper surfaces of the walls maintain the angle established by the general slope of the pyramid. The stepped area between those balustrades was originally filled to form a smooth slanting roadway, roughly paved with flat slabs of stone of assorted sizes and shapes. Some of this pavement is still in place (Pl. II, *A*). No record was found of burials.

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8. Koolonamu is said to be the name of one of the langis of Mua, Tongatabu, but no one seems able to identify it or to contribute additional information.

9. Leka (called also Lekamakatuituioha, a name referring to ore of its monumental stones) in Mua, Tongatabu, Type E (fig. 22).

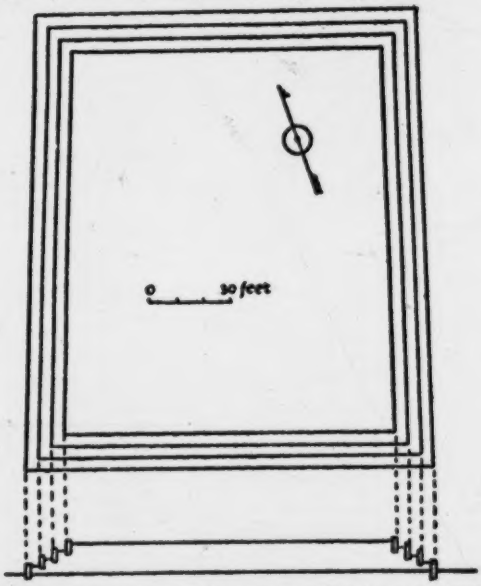

FIGURE 22.—Plan of langi Leka at Mua, Tongatabu, length of base 166 feet, width of base 140 feet, height 12 feet, height of retaining walls—bottom 3.7 feet, second 3.4 feet, third 3.2 feet, top 3.3 feet, width of steps 4.75 feet, 3.8 feet, and 3.75 feet.

Leka consists of four tiers, with corresponding retaining walls. The average thickness of retaining walls is 0.9 foot, 1.4 feet, 0.9 foot, 1.3 feet, with a maximum

7: McKern A-4,5 (1920-1921) 1929 OU9 Tonga OU9

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This list does not pretend to be exhaustive. It is intended, rather, to illustrate the general structure of Tongan fortifications and the detailed features of some of the finest examples.

ROADS

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Not least among the structural peculiarities of Tonga are the sunken roads. Their dimensions renders it highly improbable that they are the result of the wear of repeated travel. Their features suggest, rather, deliberate artificial excavation, although no good reason for building a ditch to serve as a road suggests itself. At first I thought they were courses for the game of *sika*, in which specially constructed spears were bounded along over specially prepared ways. But the great length of one of the roads, and the steep ascent of the other, renders such a use improbable. The Tongans insist that they are roads and I am not prepared to contest their views. Two of these peculiar highways were examined.

Halamate (*hala*, road; *mate*, dead), probably a recent appellative, extends lengthwise from end to end of the island of Ualeva, Haapai, a distance of several miles. It has the appearance of a square-bottomed ditch with the removed earth banked on either side. Its dimensions are 2 to 3 feet in depth, 6 feet in width at the bottom and 12 feet across the top from bank to bank. The course, as marked by a heavy growth of shrubbery along the bottom and sides of the road, follows a consistently straight direction.

The other road ascends the western slope of the hill Kafoa (p. 12) on the island of Vavau. It rises straight from the Pangaliki shore to the ridge top just below the hill. The floor of this square-bottomed excavation is about 3 feet wide and is 6 feet below the tops of the lateral embankments. The embankments stand at an angle of about 45°.

13: Beaglehole & Beaglehole E-5 (1938-1939) 1941
OU9 Tonga OU9
Vavau
Pangai

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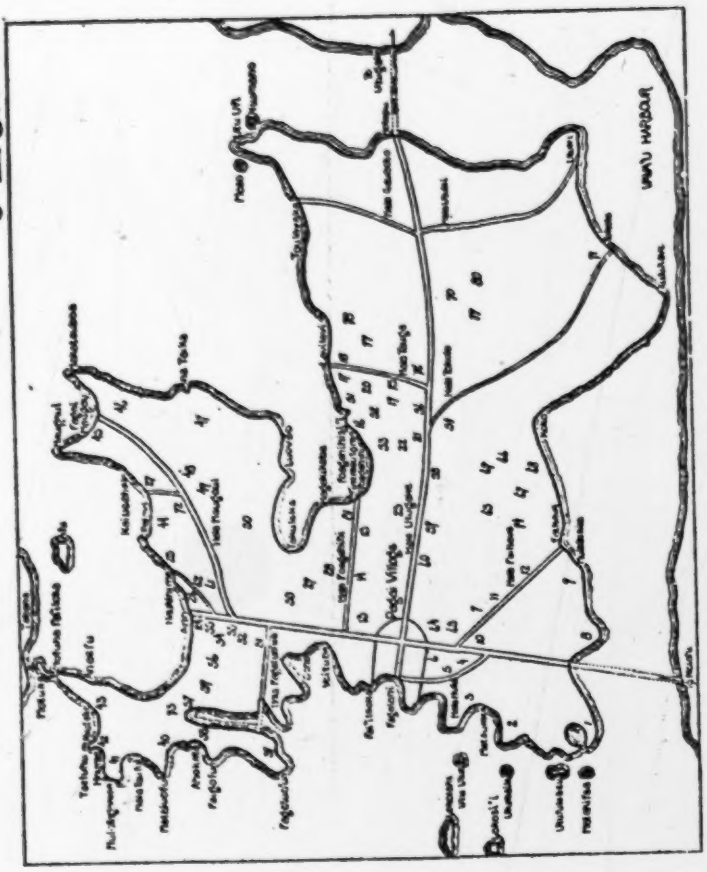

FIG. 1.
Sketch map of the island of Pangaimotu showing the location of Pangai village (here spelt Pagai), principal roads (*hala*) giving access to the plantations, together with main place names. Numbers indicate location of the plantations controlled by the villagers of Pangai.

13: Beaglehole & Beaglehole E-5 (1938-1939) 1941
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Vavau
Pangai

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THE VILLAGE OF PANGAI

Location and Climate

OF the three island groups into which the modern Kingdom of Tonga is divided, that of Vava'u is northernmost. The position of its chief village, Neiafu, is 18° 39′ south, and 173° 59′ west. Three-fifths of the land area of this northern group is in the one island, 'Uta Vava'u. The remaining islands are separated from the mainland by narrow channels, some of them fordable at low tide. The island (see Fig. 1)[A] on which Pangai village[2] is situated, Pangaimotu,[3] lies directly across Neiafu harbour. The nearest landing-place to the village may be reached by launch in a half hour. By land, it is about a two-hour walk from Neiafu to Pangai along an ill-kept bush track that is officially graced with the title of "road"; the distance is covered in half this time by horse. The ford between 'Uta Vava'u and the island of Pangai may be crossed by horse or on foot at low tide, by horse only—and then with considerable difficulty—at high tide.

[2] Pangai is a fairly common place name in Tonga. It means "meeting place" or "gathering place" and was formerly applied to the permanent or temporary residences of the Tui Kanokupolu or his agents. As noted below, the island of Pangaimotu is a royal estate. The Queen of Tonga is the present holder of the office of Tui Kanokupolu. We have no data however, as to the specific time or occasion in the past when the island and the village received their name, Pangai.

[3] Perhaps a note should be added at this point on orthography. The orthography to which the early Wesleyan and Roman Catholic missionaries reduced the Tongan language and which is in current usage at the present time, is most peculiar. It consists of five vowels and thirteen consonants. The vowels are the standard Polynesian vowel sounds. In the consonantal system however, both *b* and *p* are used for the intermediate Polynesian sound between *p* and *b*; *t* and *j* are also used as if for separate sounds, though referring to a dental *t* sound that is sometimes palatalized before certain vowels. The front palatal nasal *eng* sound is symbolized by *g*. The student has his choice between using an irrational but customary and specifically Tongan orthography on the one hand and, on the other hand, the more widely used standard Polynesian orthography. For the place-names and proper names on the two sketch-maps we have kept the

[A] [See category 116, p. 6--Analyst]

13: Beaglehole & Beaglehole E-5 (1938-1939) 1941
OU9 Tonga OU9
Vavau
Pangai

342 [178] few more of them retain Tongan shape but have frame walls and iron roofs. The old time Tongan house has the advantage of being cool and is fairly easily built. Frame houses are costly to build and hot to live in, but they have the advantage of being generally free from insects and will stand against all but the severest winds. Most of the villagers, if they were [177] free to choose, would build for themselves a European style [185] frame house. It is the ambition of most, indeed, to possess just such a house before they die.

343 514 Practically all the dwelling-houses have an adjacent cook-house. A privy is also found on most household lots. These privies are of the type introduced by Dr. S. M. Lambert as a method of combating hookworm and other tropical 312 diseases. For the whole village there are fourteen concrete cisterns collecting rainwater from the iron roofs of adjacent dwelling-houses to supply the village with water for drinking and domestic purposes. By amicable arrangement house-holders who do not have a cistern on their lot use the water from the cisterns of close relatives or friends. The cisterns are supposed to be kept covered as a health precaution. Most [164] of them are open. As a consequence, typhoid is by no means an unknown disease.

361 342 There is one dwelling-house only outside the village limits. This is situated on the nearby plantation of its owner, a plantation which borders on the boundary of the village proper. This location of the dwelling-house may [178] well represent a survival of old-time practice when the population lived in the plantations rather than grouped together in a village unit. This grouping of the Tongan 361 565 178 177 commoners in villages has apparently taken place since 1773 and is probably due to a breakdown of central authority, consequent wars and fighting, together with the subsequent influence of the Christian missions and the traders.

361 491 The village is intersected by two main "roads" that lead to the beach, the plantations, to near-by villages. By "road" is meant a twenty-foot wide strip of land that is called a road, but is grass-grown for the most part with a narrow track down the middle wide enough for foot or horse travel. Round the village, these "roads" are thick in mud and hard to pass during the rainy season, even on

13: Beaglehole & Beaglehole E-5 (1938-1939) 1941
OU9 Tonga OU9
Vavau
Pangai

foot. During the dry season, they are quite adequate for foot or horse traffic. Each householder in the village and each plantation-holder in the bush is responsible for keeping that part of the road which runs past his house or plantation free from high grass or obstructions. Numerous tracks intersect the village winding from house to house, defined according to amount of use.

THE PEOPLE

The people of Pangai village, as will be stressed throughout these notes, are commoners. Tongan society is today a stratified hierarchy with royalty and nobles at the top of the social scale, the common people at the bottom. In some villages, a high chief or noble[6] has his permanent residence. In Pangai this is not the case. Pangai island is a royal estate. The only resident in the village who claims some modicum of chiefly status is Koloamatangi, overseer of the estate. He is not a noble but stands with certain limited authority at the head of the village both because of his position as overseer and because his position as pilot for the port of Vava'u brings him sufficient pilot-fees each year to give him a more than average annual monetary income. For the rest, the villagers are just Tongans of the commoner class. Some may hint vaguely at distant relationships to some noble. In practice all disregard such hints. All think of themselves as commoners whose job in life is to work the land, to get what food and money is necessary, to obtain what pleasures life may have in store for them, to take what pains with as much fortitude as they can muster. The only significance of the following notes is that they attempt to explore some facets of this commoner life that are not yet adequately defined in published Tongan ethnologies.

CONTACT WITH WHITES

The attitude of the villager to non-Tongans is difficult to characterize. Excluding a few half-castes and other Pacific islanders, the non-Tongans with whom the villager

[6] Within the chiefly class, the present-day Tongan social system distinguishes between nobles and chiefs. Nobles are those chiefs who retain by royal grant their hereditary lands *(tofia)*. Chiefs are those other members of this class who have not retained any hereditary lands or estates but yet are chiefs because of their hereditarily-established status.

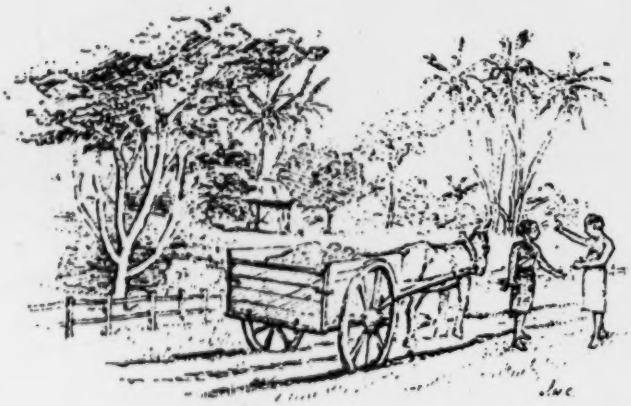
14: Thomson G-3 (1886-1891) 1894
OU9 Tonga OU9

for our current expenses. Before all things I was resolved not to negotiate a loan, and so exchange one set of liabilities for another, besides setting my colleagues a dangerous example which they were sure to follow in future times of financial embarrassment. It was better to make our creditors wait, and silence them by doling out instalments from time to time. I must now make a disgraceful confession. Among the letters in the postmaster's office were a number from firms in England and America which deal in postage stamps, some of which had enclosed considerable sums of money. The Treasury was in dire straits, and a sum of £200 well worth a sacrifice of self-respect. We determined to change our stamps. The change could be effected for £40, and the sale of our old stamps, thus enhanced in value, would bring us in £200 or more. I have since heard that a year later the Government of Costa Rica descended to the same disreputable expedient, but I believe I may fairly take to myself the discredit of being the first to devise the scheme.

Many a time did I curse the complaisancy of Tukuaho in binding his people to pay in copra when they were so ready to pay in coin. Numbers had been turned away from the tax-office with money in their hands, vowing that they would not hire a cart to carry their copra along miry roads for many miles when they could sell it advantageously to the storekeeper in their own village. The main road from the interior branched just opposite our house, one branch leading to the Government copra-sheds and the other to the stores of the traders. At the sound of wheels I used to come out to watch the copra-laden carts reach the turning. If they

14: Thomson G-3 (1886-1891) 1894
OU9 Tonga OU9

turned to the left they were loyal subjects of King George, going to pay their just debts to his Government; if they took the straight road on they were traitors and renegades, who loved filthy lucre better than the honour of their country. I tried to guess from the drivers' faces which way they would turn. "Here," I thought, "is a loyalist." The mild-faced, semi-clerical-looking driver left the reins slack on the horse's neck: the cart creaked



"There was an animated discussion."

onward. For one moment it seemed to pause as if about to turn off, but it was fancy: the horse did not leave the middle rut, and the driver was a traitor in loyalist clothing after all. Clumsily disguised though, for I used then to remember that he had a cunning expression about the mouth, for all his assumed benevolence. Once a long string of carts going towards the traders so exasperated me that I sent a servant to waylay the next comer, and to tell him to take his freight to the Government stores.

14: Thomson G-3 (1886-1891) 1894
OU9 Tonga OU9

231 One result of the introduction of horses has been the
137 almost entire destruction of the bread-fruit-tree throughout Tonga. The glutinous sap is irresistible to horses, and they greedily tear off the bark as far up the trunk as they can reach, of course killing the tree.

The men ride like centaurs, but, unlike centaurs, they
231 have no hands. As a consequence, the Tongan pony
492 has no mouth. Almost as soon as the boys can walk they are galloping barebacked, with no bridle but a rope knotted round the horse's nose. Grown men generally use a saddle of some kind without girths or surcingle,
[562] and too often without stuffing. The women have not yet taken to riding like their cousins in Hawaii, who have even converted the European women of the place to trousers and a man's saddle.

The people are as cruel to their animals as the Egyp-
231 tian donkey-boys. A sore back is never thought a reason
825 for sparing a horse. I have seen ponies returning from the plantations in the evening with a basket of yams slung on either side with a sinnet cord, which was cutting deep into a bleeding raw on the withers. I stopped the man and tried to convince him of his brutality. He was simply incapable of comprehending the idea of cruelty to animals,—an idea which, after all, is only found among the stricter Buddhists and the Anglo-Saxons, and with the latter is but the growth of a single century.

The wheel traffic of Tonga has increased enormously.
493 Every man who can afford it has a cart, the richer natives
[491] American buggies. In wet weather the wheels cut the soft grass-roads into rivers of mud, in which the wheels are logged to the axle-trees. On such roads the heaviest

20: Gifford E-5 (1920-1921) 1924 OU9 Tonga OU9

at Tongan feasts do the same. The combination of European dress and fingers for knives, forks and spoons seems strikingly incongruous to one new to the custom. At the end of the meal a basin of water is passed around, so that each one may wash his hands.

Perfumes are much appreciated by the Tongans and traders say that they discriminate between the cheaper and the better grades. This is clearly but a transferal of their old interest in perfumed coconut oil, with which they still freely anoint themselves.

European alcoholic drinks are called kava papalangi (foreign kava). They are permitted only to the land-holding chiefs, in a limited quantity, and to foreigners. Commoners must go without.

Stone, bone, and shell implements have been supplanted long since by metal implements. Contact with Euro-American culture has resulted, however, in the rise of a new stone implement. This is the slab of stone and the stone pounder for preparing kava root. Formerly this was chewed to prepare the brew; now, owing to Caucasian influence, it is pounded.

The former narrow roads that traversed the various Tongan islands have now all been replaced by roads of standard width for wheeled vehicles. The commonest vehicle is a two-wheeled cart imported from New Zealand. The Tongan usually dispenses with the board seat and sits cross-legged on the bed of the cart. In the two large islands of Tongatabu and Vavau automobiles have made their appearance. They are the more numerous in the former island where the levelness of the country makes for ease in driving. The majority of cars are driven by Caucasians, but the Tongans are fast learning. Many Tongans have been familiar for years with gasoline launches.

Vehicles keep to the left in Tonga.

Many Tongan houses show a hybridism in construction. Often the roof will be of corrugated iron instead of the regular thatch. Or again, the sides and rounded ends will be of boards instead of cane. These innovations usually do not affect the shape of the house. Many churches are in native architecture, which employs sinnet cord instead of nails.

Appreciation of money is naturally developing in Tonga and is undoubtedly an important factor in the process of acculturation. National feeling, though probably existent

22: West M-3 (1846-1855) 1865 OU9 Tonga OU9

Beyond these stands the *Bou valu*, a large open building devoted to the reception of strangers, and to the transaction of all public business. Around this place there is a *malae*, or grassy sward, of several acres in extent, fringed by cocoa-nut and cedar trees; the prospect being bounded on the right by the hill of Neiafu, at the foot of which lies a burial-ground, where the remains of two missionaries have been interred, near the tombs of the leading native families.

Proceeding a little further inland, the Chapel is reached. That which stood there in 1846, measured one hundred feet by forty-five. Turning from thence to the left by a road leading towards Talau, the Mission premises were soon reached. These consisted, at the time specified, of a large printing-office, containing three presses with all their necessary appurtenances; and beyond that building lay the dwellings required for three Mission families. These were erected upon separate *abis*, or allotments of gardening land, the whole being surrounded by a neat native fence, with a magnificent row of large orange-trees lining the entire frontage to the road.

After the bustle of landing our stores was over, the active duties of Mission life immediately commenced. Among these, the acquirement of the language was felt to be the thing of greatest importance. We had not been idle in this matter since reaching the islands: but still, in the prevailing religious excitement, and the consequent increase of labour devolving upon our senior colleague, Mr. Turner, we saw abundant reason for prosecuting its study with unsparing diligence. We longed to take an active part in the religious

22: West M-3 (1846-1855) 1865 OU9 Tonga OU9

159 563 797 793 professed Christianity; and, after a while, was truly converted. His heathen relatives then tried by various means to force from him a recantation of his religion. But, rather than yield before their persecutions, or to their persuasions, he embraced an opportunity that presented, of making his escape to the Friendly Islands, where he knew he would be permitted to worship God in peace. Although often solicited since then to return to Lakemba, where he would at once be assigned no mean station among the ruling chiefs, he has steadily refused; preferring rather to hold the sacred office of a Minister in the Church of Christ, and to labour for the spiritual benefit of the people amongst whom his early religious impressions were fostered and ripened into maturity. Faubula was a great favourite with us, in all our Missionary boating expeditions. He was intrepid, skilful, and hearty. He was also possessed of a fund of natural vivacity and wit, which enabled myself and the boatman, who always accompanied me, to pass pleasantly many an hour upon the sea, under a blazing sun, which otherwise would have been wearisome enough.

159 797 157 563

797 [794] Vavau contained, when we arrived, nearly three thousand church members. There were thirty-two preaching-places, seventeen of which were reached by water. The others varied in distance, from the Mission station, from two to ten miles. Having no horses, at that time, the labours of the Missionaries were extremely exhausting. The inland journeys were commenced before sunrise, and pursued during the cool of the morning; but, whilst thus avoiding one evil, another was encountered, equally great, if not worse. The roads, in most places, were no better than footpaths through the long

[491] [132]

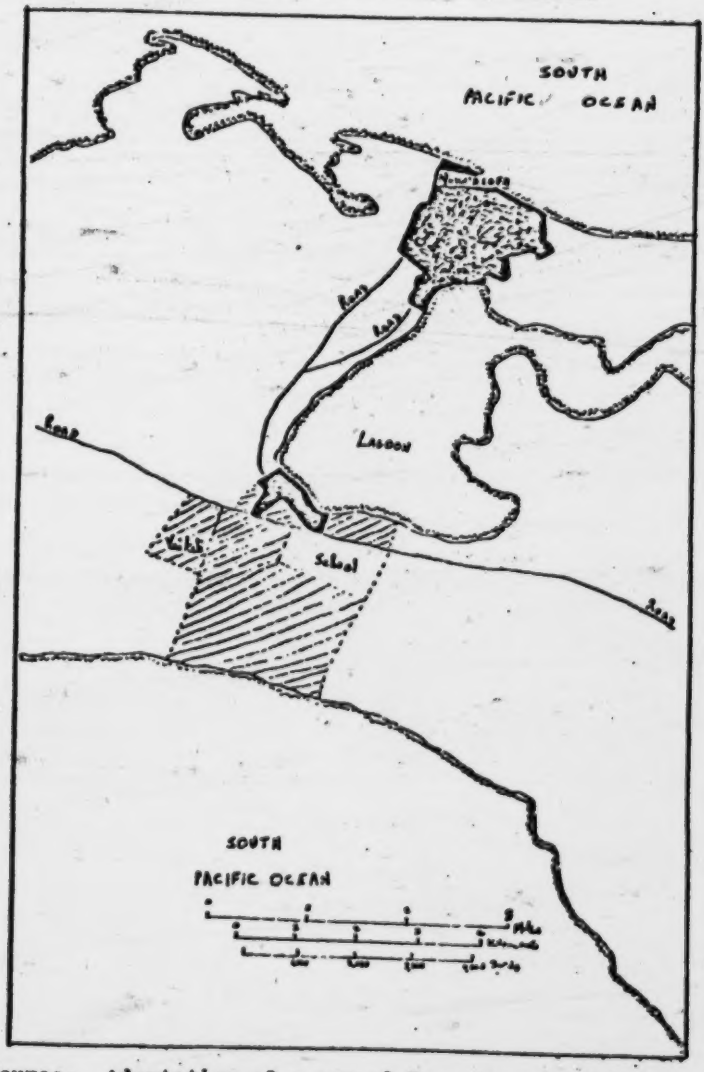
22: West M-3 (1846-1855) 1865 OU9 Tonga OU9

grass and brushwood; and, everything being saturated with the heavy dew of the previous night, one could not proceed far on a journey, before being thoroughly drenched. Indeed, it would have been quite as comfortable, in some instances, to have waded through a river, as to push a way through the long grass, and other prolific vegetation encroaching upon the road, laden with glistering dew. The arrangement for a Sunday's work, was usually something like the following:—Breakfast about four A.M. Then walk to the most distant place for the day, say nine or ten miles. Preach there at nine o'clock. Refreshment after service, and then a walk of a few miles, under a vertical sun, to the second preaching-place, where service would be held at one o'clock P.M. From thence another village would be reached, in time for a third service, about four o'clock P.M. All this done, the exhausted man would arrive at home again, a little after sunset. Destructive as these labours were of health, in such a climate, they were the necessary result of two men attempting to do what would have fully taxed the strength and time of even four.

Such are the circumstances under which oftentimes the cry comes from distant Mission-stations for additional help. A Missionary brother, more vigorous than his fellow-labourers, is left standing alone at his post, after all the others have been removed by sickness or death. He only out of the number is left to pastorize the famishing thousands around. Innumerable cares of the churches crowd upon him; journeys are multiplied; religious services are increased; the very hours of necessary repose are diminished; while, in a variety of ways, the

46: Decktor Korn E-5 (1969-1970) 1978 OU9 Tonga OU9
Tongatapu
Motulahi

MAP 4. Central Section of Tongatapu



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361
491
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Source: Adaptation of a map of Tongatapu supplied by the Tonga Department of Lands and Surveys.

46: Decktor Korn E-5 (1969-1970) 1978 OU9 Tonga OU9
Tongatapu
Motulahi

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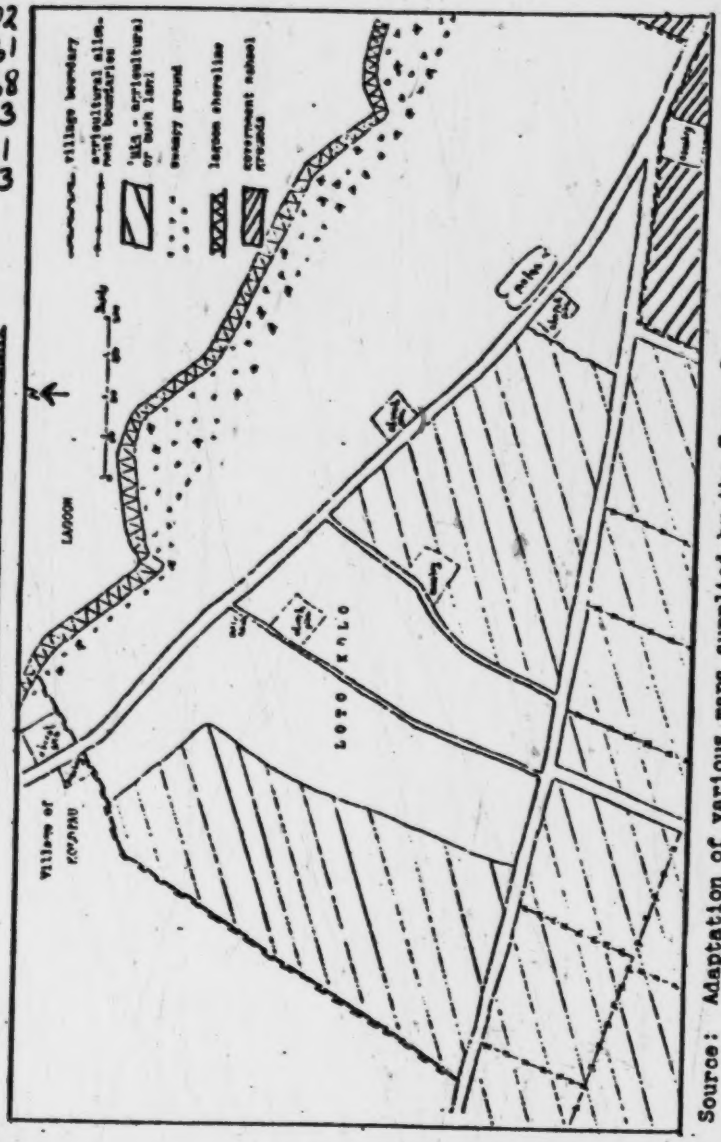

MAP 5. Residential Sector of Motulahi

Source: Adaptation of various maps supplied by the Tonga Department of Lands and Surveys, supplemented by fieldwork observations.

54: Cook G,T-5 (1777) 1967 OU9 Tonga OU9

which on most occasions was our interpreter had either been misinformed or what was more likely had missunderstood them for in this affair we had been labouring under some gross misstakes, this Marriwaggy, tho a great man yet was by no means superior to Fattafee Polaho. I was now very sorry I did not make a longer stay at the place we went to; it was a Villige most delightfully situated on the bank of the inlet, where all or most of the great men in the island resided, each having his house in the midst of a small plantation, with lesser houses and offices for servants &c[a]. These plantations were all neatly finced round, with for the most part only one entrance which was by a door that was generally fastened on the inside by a shore or prop of wood, so that a person has to knock before he can get admittance. Publick roads and narrow lanes lay between every plantation, so that no one trespasseth upon another. Great part of some of these plantations were laid out in grass plats, and planted with such things as seemed more for Ornament than use; but hardly any were without the Cava plant on which they make their favourate drink, and some were planted with every thing the island produceth, but I observed these were not the residence of people of the first rank. There were some large house[s] near the publick roads uninclosed with large smooth grass plats before them; these I was told belonged to the King, they seemed to be common to every one and were probably the places where they have their publick assembl[i]es. On our first landing we were conducted to one of these houses where we seated our selves according to the Custom of the Country and in a short time had a very numerous assembly who very orderly seated themselves in a simicircle before us, not one attempting to come near us unless desired.

FRIDAY 13*th*. About Noon the next day this Mariwaggy we had heard so much of actually came, and with him a very considerable number of people of all ranks. In the after noon a party of us accompaned by Feenough went to pay him a visit; we found him amongst a great number of peop[l]e of both sex Seated round a large piece of Cloth, not less than 40 yards in length, spread out on the ground. At the upper end sat an elderly Chief named Toobough, which for distinction sake I shall call old Toobough,[1] him, from the place he was seated, we took to be Marriwaggy till undeceived by Feenough, who interduced us to him seated on one side; he received us very kindly and desired us to sit down by him; he and also Toobough had a very venerable appearence, both being grey with age. The meeting with

[1] i.e. a different Tupou again, and a more important one: see p. 129, n. 1 below.

54: Cook G,T-5 (1777) 1967 OU9 Tonga OU9

tops of the Mounts round the houses, there were a few rude Images of the human figure, of different ages. We were told they were there as monuments to the Memory of the dead and not the representation of any Deity.[1] Such monuments they seldom raise for these seemed to be very old. In one of the house[s] was the Carved head of an Otaheite Canoe which had been driven a shore on their coast and deposited here. After dinner, or rather after we had refreshed our selves on what we carried with us, some of us took a Walk into the Country making a pretty large circuit attended by one of the Kings Ministers,[2] our train was not great as he would not suffer the rabble to follow us, he also obliged all those whom we met to sit down till we pass'd a respect due only to their Kings. We found by far the greatest part of the Country cultivated and planted with one kind of production or a nother and the most of these plantations were fenced round. Some old Plantations lay uncultivated or in fallow, and there were places that had never been touched but lay in a state of Nature but even these places were usefull in affording them timber &c[a] with which they were generally covered. We met with several large uninhabited house[s] which we were told belonged to the King or the Lord of the Manor;[3] there were many publick and well beaten roads and as many foot paths leading to every part of the island. The roads were good and the Country level consequently traveling was easy. On the most elevated parts, we met with coral rock close to the surface, perforated and cut into all those inequalities we see them in the wash of the sea, yet these very rocks with hardly any soil upon them were covered with a luxuriant vegetation. We were conducted to several little pools and some springs of Water, but the most of them were either stinking or brackish tho recommended as excellent.[4] The

[1] These three mounts seem to have been the great *langi*, called Tuoteau, Katoa and Tuofefafa, with a smaller fourth one in front, unnoticed by Cook, called Tauatonga. Cook does not mention stone-work, apart from the wall, so the stone of the *langi* may have been heaped over with earth. These lay to the north of the eastern side of the great *mala'e*, and in front of them was a smaller *mala'e*. Within them were the stone vaults or burial chambers. The houses, *falefolia*, were set up to protect the central part of the covering of fine black volcanic pebbles, called *hilikili*, which marked a vault. The information about the 'rude Images' being 'monuments' or commemorative figures was probably correctly gathered: cf. II, p. 251. The Tongans did not carve representations of their gods.

[2] No doubt a *matapule*, one of the non-chiefly but important officials on whom administration so much depended, attendant on a chief and sometimes his spokesman.

[3] By 'Lord of the Manor' Cook presumably means an '*eiki*, a great chief or 'noble', whose power, under that of the Tu'i Tonga, was territorial, as well as extending to the persons of the common people.

[4] Williamson, 20 June, provides a dissenting opinion: '. . . I have great reason to think that fresh water might be had by sinking a well at some distance from the lagoon, & am the more confirmed in this opinion from the many wells of delightful water, which we met with during our prerigrinations, some not less than thirty feet deep, & made extremely neat & clean.'

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73: Morton E-5 (1970-1971) 1977 OU9 Tonga OU9
Puke

368 Besides dwellings and the attendant secondary buildings, Puke has
366 a church, a town building, a kindergarten, a clinic and a store. All except the last are grouped on a small piece of land donated by the noble for community purposes. The store is located next to the house of the store owner.

491 An unsurfaced road connects the village with the main road and
494 buses traveling the main road are usually the only form of motor trans-
365 port used by the villagers. A power line runs beside the main road but no feeder line has been extended to Puke and there is no other source
312 of electrical power. The major sources of water are rain catchment and storage in brick and cement cisterns. There are also a few hand-dug wells from which water is obtained by rope and bucket.

Village Demography

162 Village population in 1971 was 261 persons living in 42 households.
[592] Table 5_A^A describes the population by age and sex. The population has
(166) grown considerably since 1955 due largely to migration from more remote
(161) islands of Tonga (See Table 6_A^B for origin of household heads and Table 7_A^C
369 for crude growth rates). Puke, being close to Nuku'alofa, has experi-
166 enced the effects of rural-to-urban migration in the archipelago (See Walsh 1969: 95-98). Recent immigrants have come to Puke because it provides easy access to services centered in Nuku'alofa not available in most of the more rural locales. Opportunity for education and better health care are frequently given as reasons for wishing to live close
166 to Nuku'alofa. Informants also mention the greater availability of

$_A^A$, $_A^B$, $_A^C$ [See pp. 27-29 respectively--Analyst]

[TEXT CONTINUED ON PAGE 30]

87: Wood M,Y-4,5 (no date) 1932 OU9 Tonga OU9

and mobs of untended horses roam through the island. It contains varied scenery, valleys, and precipitous cliffs lining the eastern coast.

TOGATABU. This name (Sacred Tonga), as well as the others used by the people (Great Tonga and Chiefly Tonga), attests the importance of the largest island in the minds of generations of Tongans. From the foundation of Tonga to the present it has been the residence of the kings and the centre of religious and social life, and modern investigation has confirmed the native tradition that Togatabu was settled before Ha'abai and Vava'u. The island is 99 square miles in extent, with its extreme length 18¼ miles and greatest breadth 9 miles. The southern coast is rather higher than the northern, where the capital, Nuku'alofa, is situated opposite the only openings in the reef which surrounds the island; but Togatabu generally is low, except in the east where the land rises to 270 feet. There are three main roads traversing the island from west to east and several cross-roads. The present population is 12,357, of whom 11,660 are pure Tongans.

Nuku'alofa is the capital, the residence of the sovereign, and the centre of government and trade for the whole group. The Palace and Royal Chapel are conspicuous buildings; and the royal dais in the chapel is finely carved. The tombs of the present line of kings are at Mala'e-kula, in the centre of the town. Behind the British Consulate is a hill (Zion), the site of the old fort described by Mariner.

Mu'a, which consists of two villages, Tatakamotoga and Labaha, was the ancient capital; the kings of the Tu'i Toga line after Tu'itatui resided at Labaha, as also did the Tu'i Ha'atakalaua, and the southern village of Tatakamotoga belonged to the Tu'i Kanokubolu. In Mu'a there was also a renowned enclosure, Fanakava, which was a sanctuary for refugees from justice. The most remarkable feature of the Mu'a district is the series of 28 tombs (lagi) of the ancient kings. Each of these is a rectangular structure, covering as much as three-fourths of an acre, with from three to five terraces in pyramidal form, built of blocks of stone the largest of which weigh 30 tons each. Many of these tombs are well-preserved and easily accessible, especially the Baebae of Tele'a, whose smooth surfaces and L-shaped corner-stones have won the admiration of experts. Such striking examples of the skill of ancient Tongan stone-masons afford one of the finest sights in the South Seas.

At the extreme east of the island, at Heketa near Niutoua, there is situated the famous trilithon known as the Ha'amoga-'a-Maui. This was built by the Tu'i Toga, Tu'itatui, about the year 1200, probably as a gateway. The upright stones are 17 feet high, and the cross-piece is 19 feet in length. Nearby are the stone where Tu'itatui sat, the Maka Fakinaga, and two tombs from the same period.

The remains of "Captain Cook's tree," called Malumalu 'o Fulilagi by the people, may be seen at Alaki. It was here that Cook was entertained in 1777 when he visited the Tu'i Toga and saw the presentation of first-fruits.

Stalactite caves near Haveluliku on the southern coast, like those found in other parts of Tonga, seem to have been used for burials in ancient times.

87: Wood M,Y-4,5 (no date) 1932 009 Tonga 009

206 Wireless stations have been established at Nuku'alofa, Lifuka (Ha'abai), Vava'u, Niua Fo'ou and Niua Tobutabu; only the first station has communication with other countries. There is also a telephone service at Nuku'alofa.

494 The advent of motor traffic has made the improvement of roads necessary, and these have been built with the only available stone, coral 491 limestone.

VITAL STATISTICS, EDUCATION AND RELIGION.

161 The estimated population, full-blooded Tongans only, on 31st December, 1931, was 29,157. Tonga is one of the comparatively few Pacific Island groups where the population is steadily increasing. There is no justification for imagining that the population of Tonga has ever reached 30,000, but rather the indications are that, even in the most prosperous times before the coming of Europeans, it did not exceed 25,000. The present figures may therefore be taken as the highest level which the Tongan population has reached, and there is no fear that the country cannot support a population continuing to increase at the present rate for several decades.

162 Reference is sometimes made to Cook's statement that 10,000 175 people were present at the festival held in his honour at Togatabu, and 161 3,000 at Lifuka. Especially bearing in mind the visitors who would come from other islands for such a unique event, these figures certainly do not 361 justify a belief in a greater population than the present. The land seemed 175 then to be better occupied as the people were spread out over their gardens, there being no villages until the Civil War period.

161 Wilkes received an estimate from the missionaries in 1840, and this may be compared with the Government statistics in this century, [165] noting the effects of the pneumonic influenza epidemic in 1918–19 and the way in which the loss of 1,000 lives then has since been more than redeemed (these figures are for full-blooded Tongans only):

1840	18,500 (excluding the two Niuas)
1900	20,019
1911	21,712
1917	24,245
1918	23,842
1919	22,689
1920	23,128
1924	25,109
1927	26,597
1929	27,660
1930	28,431
1931	29,157

161 The Police Census of 27th April, 1931, gives a total of 28,839, comprising 27,700 Tongans (this involving a discrepancy with the estimate 162 of the Registrar of Births and Deaths), 482 Europeans, 265 half-castes, 336 other Pacific Islanders, 56 foreigners, mostly Asiatics.

563 Racial inter-marriage is not so common at the present time; nevertheless, a considerable proportion of those officially classed as "full-

361 178 423 the bush) was also sharpened by legal definition in the "Constitution of 1875" (Walsh, 1970:29-30).

361 369 Nuku'alofa became the center of Wesleyan missionary work in 1828; in 1845, King George Tupou I selected it as the site for his capital (Maude, 1965:63). Since that time Nuku'alofa, which is composed of three coalescent villages, Kolomotu'a (Old Town), Kolofo'ou (New Town), and Ma'ufanga, has been the religious, governmental, educational, commercial, economic, and cultural center of Tonga.

361 491 162 Including the three villages of Nuku'alofa, there are 59 villages on Tongatapu, almost all situated on the road which encircles the island. In 1966 the "urbanized" area of Nuku'alofa with the satellite town of Haveluloto had a population of 17,241; the next largest village is Mu'a (which includes Tatakamotonga and Lapaha), the ancient capital located in the Eastern District, with a population of 3,502. The smallest village is Kala'au in the Southwest with a population of 89; the median population of all villages is 412.5 (based on 1966 census figures). Surrounding each town is an area of bush allotments to which the Tongan farmers commute. In some cases, however, especially in the Fua'amotu-Pelehake area in East-Central Tongatapu, individuals farmers do have permanent residences on the bush allotments. In this particular area, the government has attempted to re-eastablish a dispersed settlement pattern by offering them single, larger allotments ranging from 12 and

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241 stay overnight at the bush allotment.

241 Wells were found on 6 allotments and a cement rain -
312 catchment tank was present on another. On 4 of these, there were permanent dwellings and on 3, garden vegetables were grown.

241 There were 11 allotments with copra driers; 7 of these
245 had permanent dwellings and two had substantial temporary dwellings.

241 Good condition barbed-wire fencing was found around
417 parts of 10 allotments, poor condition fencing around 2, and another 24 had some fencing along one side or across
241 the central portion of the allotment. In almost all cases, fences were used to protect crops from livestock, particu-
241 larly horses. Although treated wood fenceposts are becoming
417 increasingly common, living fence posts such as ngatae
245 (Erythrina variegata) and fiki (Jatropha curcas) are more common.

241 As for accessibility, 89 allotments had some kind of
491 roads bordering or through the property; of these, only 29 had paved coral or black-top roads. In about half of the cases where allotments had unpaved roads, these were often impassable, except by horsecarts. There is a continuing effort to improve accessibility by expanding the paved feeder-road system.

241 There were 10 allotments with pigs; in 7 cases, they
231 were either tethered or roaming free. On all but one of

/93 cont./

368 there are three churches (party in Tongan style) in the settlement inhabited by only 200 natives.

[366] In addition, a village has a government school and often a Wesleyan school as well, one to four kautaha houses (meeting place of the women's cooperative for tapa- and mat-making) and one to four small (retail) shops.

361 Although most of the houses are situated on the roads that intersect
351 the villages, their distribution seems irregular. The broad grassy areas (265)

[245] 265. These are often interspersed with mango and bread-fruit trees.

on which they are situated are (in accordance with the law) cut short by the natives, but are often untidy looking. Since most individual plots are not fenced in and the neatly plaited fences of plantations and houses praised by observers in old times have long since been forgotten the villages give an even more unkempt impression.

361 These villages are a development of more recent times. In
178 ancient Tonga the houses of commoners were scattered throughout the
[491] islands; people lived on their plantations, (266)

266. Ellis writes, for example: "The houses do not form towns or villages, but are built about five hundred yards or more from each other and generally in the midst of a plantation, the whole of which is frequently fenced in with a hedge of bamboo, or reeds with a door-way"; /cited in English/ (W. Ellis, An authentic Narrative.../cited in English /. loc. cit. I. 1782 pp. 88/89.

and many roads made possible easy connection between the plantations. (267)

267. Reminiscent of this old way of settlement are the huts on individual plantations found even today on various islands, which are very

/230 cont./

484 494 493 of all kinds (even for carrying pigs). In 1951 there was a total of 80 private cars in the Archipelago (600)

600. Ibid. p.23.

almost all of which drove on Tongatapu; some were owned by whites living there. Moreover, in the same year, 16 motorcycles (601)

601. Ibid. p. 23.

were registered in the Archipelago.

491 The old Tongan roads were, of course, not equal to traffic by such vehicles. From the sources we can scarcely tell whether the former "roads" were in any way paved or were simply surfaced with hard-pounded clay. While the small islands are today still criss-crossed by the traditional unpaved and, in the rainy season, very soggy roads and paths, some of which go back to the distant past, others to the beginning of the settlements, the islands of Tongatapu and Vava'u have a few good highways, fully adequate for truck traffic year round, surfaced with coral stone or even asphalt; these were built by Tongans under the supervision of Whites. In 1951 there were about 60 miles of such roads on Tongatapu and 18 miles on Vava'u. (602)

602. Colonial Office, Report 1950/51. p. 23.

484 50 As for sea traffic, the most important change in comparison with the past is the complete stop of long trips to other archipelagos

501 197 484 with catamarans. It has been a very long time since those so "carefully and skillfully built" (603)

603. See J. Cook, Beschreibung...loc. cit. VI. p. 287.

catamarans (604)

604. In the second half of the 18th century, the Tongans gave up their catamaran-type known as "tungiakia" in favor of the Fijian "ndrua"-catamaran, which they felt was superior, and which they copied masterfully and called

162 percentage increase of 48.3 percent of the total "urban" population
161 and represented in excess of 46 percent of the Kingdom's popula-
166 tion. Nuku'alofa alone accounted for nearly 21 percent of the
162 national population total.

[361] It is important to note that 9 of the 13 settlements (Table 6) are in the middle and eastern sections of the Tongatapu district, the areas where economic and educational activities are concentrated. These 9 villages represent nearly 60 percent of the island's population, with Nuku'alofa, alone, accounting for 32.4
361 percent of the total (Fiefia 1968, p. 10). An example of extremely
166 rapid village growth is the case of Haveluloto (Havelu). This rapid growth is the result of three factors:

1. The proximity of Havelu to Nuku'alofa attracts many people who could not find land within the capital.

[366] 2. The relocation of the Tonga Copra Board and the Tonga Construction Company, from Nuku'alofa to Havelu, was accompanied by a subsequent relocation of employees.

[368] 3. The construction of a new island hospital within Havelu has attracted many residents.

361 The major road between Havelu's hospital and Nuku'alofa is solidly
491 lined with dwellings.

162 The four remaining villages of over 1,000 population, not found on Tongatapu, are divided evenly between Ha'apai and Vava'u.
162 Of these, Pangai declined in population during the intercensal
166 period, while the other three registered the lowest percentage
161 increases of the 13 settlements. This statistic indicates that movement from rural to urban areas was not as influential within

[See Category 162, p. 38--Analyst.]